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ABSTRACT

This guide provides information for use in achieving sex equity in industrial arts programs. Listed first are a series of standards pertaining to sex equity in industrial arts programs. Following a discussion of the impact of social change on education, the concept of sex equity is examined. Defined next are the major terms used in the guide. The issue of sex equity and industrial arts education is examined briefly. Covered next are the following strategies for achieving sex equity: (1) assessing sex-fair teaching behaviors, (2) reviewing guidelines for sex-fair language, (3) evaluating curriculum and instructional materials, (4) determining progress toward achieving sex equity, and (5) planning future progress. Also provided are information on resource personnel and selected references. (A series of related industrial arts program guides are available separately--see note.) (MN)

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Sex Equity Guide

for Industrial Arts Programs

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Standards for Industrial Arts Programs Project
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4 Standards Relating To Sex Equity

Among the 235 standards which appear in the document entitled *Standards for Industrial Arts Programs,* there are nine which directly address sex equity. These are listed below:

Philosophy

1.1 3.b) The philosophy identifies the needs, abilities, and interests of all learners, regardless of race, sex, creed, national origin, or handicapping conditions.

Student Populations Served

3.2 1. Females, as well as males, are encouraged to enroll in industrial arts courses.

3.2 2. Industrial arts activities are provided for all students on a sex-fair basis.

Instructional Staff

4.1 4. The industrial arts teacher is prepared, through preservice/inservice education, to eliminate sex bias and sex-role stereotyping.

Administration and Supervision

5.5 4.b) Demographic data about all industrial arts students are available by grade level and by course, including but not limited to course enrollments by racial and ethnic categories, by sex, and by type and number of students with special needs.

Support Systems

6.1 3.a) An industrial arts advisory committee is established which has representation of both sexes and the racial and ethnic minorities found in the program areas, schools, community, or region which the local advisory committee serves.

6.2 9. Lavatory facilities for both sexes are provided near or in the industrial arts laboratory.

6.2 15. Books and other instructional materials contain sex-fair language and images and provide a wide range of role options.

Instructional Strategies

7.2 1.c) Instructional methods utilized are based upon individual student needs rather than upon sex of the students.

The Impact of Social Change on Education

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> The process for achieving equity in education in the future is in a state of change. In the 1980's the key to attaining sex equity will be through infusing the concept into the education system
>
> Shirley McCune, 1981

The myths surrounding what is appropriate for females to study and how they should spend their time as adults are rapidly being dispelled. The slogan, "A woman's place is in the house—the House of Representatives," is an indication of the changing attitudes of today's women. In 1979, the United States Department of Labor documented womens' changing life styles and interests when it reported that out of every ten young women in high school, nine would work for pay outside of the home at some point in their lives. By the end of this decade over 57 percent of all adult women are expected to be working.

Women accounted for nearly three-fifths of the increase in the civilian labor force in the last decade—an increase of 13 million women compared with nine million men. Statistics show that the more education a woman has, the greater the likelihood that she will seek paid employment. Among women with four or more years of college, about three out of five were members of the labor force in 1978. Because women are becoming increasingly involved in the economy as producers and consumers, it is important that they acquire technological literacy and gain an understanding of our total economic system.

Changing attitudes about womens' participation in the work force are part of social changes affecting all American women. Women of all ages are making conscious decisions about educational programs, future careers, and personal life styles. These changing attitudes place a responsibility on all educational programs. The need to expand educational options for females is essential to their survival as participating adults in our technological society. Of 441 occupations listed by the United States Bureau of the Census, a significant number of females are employed in only 60 occupations. Thus 70 percent of women in the United States are clustered in traditional jobs that tend to offer fewer economic rewards than other jobs.

6 The Concept of Sex Equity

The quest for fair and equitable treatment for everyone is a part of the American tradition. However, it is only within the past few years that sex equity has been treated as an important concept in education.

Traditionally, education reflected the inequalities in our society. Girls and boys were encouraged and tracked into those programs and classes assumed most appropriate as preparation for traditional adult male and female roles. In many schools, boys were regularly channeled into industrial arts while girls were enrolled in home economics. It has only been within the decade of the 1970's that these inequities have been recognized and efforts have been made to expand educational options, especially for girls.

Although stereotyping students by sex continued in certain industrial arts classes, evidence indicates that leaders in education were becoming aware of the limitations which sex bias and sex-role stereotyping had on the lives of both boys and girls. It was not until the passage of Title IX of the Education Amendments of 1972 (P. L. 92-318) that any serious effort was made by educators as a whole to reduce sex discrimination in education. The law reads:

> "No persons. . . shall on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

Title IX was the first comprehensive law prohibiting sex discrimination in the admission and treatment of students by educational institutions receiving federal assistance. Compliance with Title IX involves the identification and correction of policies, practices, and procedures which discriminate against students and employees on the basis of their sex. Title IX implementation applies directly to local educational agencies and institutions. In effect, this legal mandate ensures equal access for both girls and boys to all academic classes. Specifically, it ends the restrictions which prevented girls from participating in industrial arts merely because they were female.

In support of the spirit of Title IX, the sex equity provisions of Title II of the Education Amendments of 1976 (P.L. 94-482) were enacted. Title II complements the basic nondiscrimination requirements of Title IX. The purpose of Title IX is to provide equal opportunity or to be sex fair, while the purpose of Title II is to go beyond sex fairness and take affirmative action to overcome the results of past sex discrimination, sex bias, and sex-role stereotyping.

Both Title IX and Title II have substantially altered the traditional practices, policies, procedures, and attitudes that prevented girls and women from participating in many educational programs, including industrial arts. The document, *Standards for Industrial Arts Programs* is firmly based on the spirit and letter of these laws. The laws set the stage. How we enforce and react to them will make the difference.

8 Definition of Terms

To address sex discrimination, sex bias, and sex-role stereotyping in industrial arts education, it is necessary to define some of the important terms.

Sex Equality (Equity)

The opportunity, encouragement, and support of every individual to learn and work according to his or her talents and interest regardless of her or his sex. *(O'Neil, M. L., & Schonborn, B. G., 1978, p. 2)*

Behaviors Which Build Equity

Sex Fair

Any policy, procedure, practice, behavior, or attitude which either treats people equally or impacts equally on them. *(McCune, S., & Mathews, M., 1977)*

Sex Affirmative

Behaviors which go beyond sex fair by attempting to overcome the past effects of discrimination. *(P.L. 94-482, 1977)*

Behaviors Which Limit Equity

Sex Bias

Behaviors resulting from the assumption that one sex is superior to the other. *(P.L. 94-482, 1977)*

Sex Discrimination

Any action which limits or denies a person or a group of persons opportunities, privileges, roles, or rewards on the basis of their sex. *(P.L. 94-482, 1977)*

Sex-Role Stereotyping

Attributing behaviors, abilities, interests, values, and roles to a person or group of persons on the basis of their sex. *(P.L. 94-482, 1977)*

9 Sex Equity and Industrial Arts

> Industrial arts as a subject area of the school stands in a critical position to deliver broad-based economic and technological understanding to all youth and adults.
>
> Willis E. Ray, 1979

Traditionally, industrial arts classes have been dominated by males. Data for the 1962-63 school year in *Industrial Arts Education, A Survey of Programs, Teachers, Students and Curriculum* by Schmitt and Pelley revealed that females represented less than three percent of the total industrial arts enrollment. Data collected by the Standards for Industrial Arts Programs Project in 1978-79 revealed several enrollment changes from the Schmitt and Pelley data.

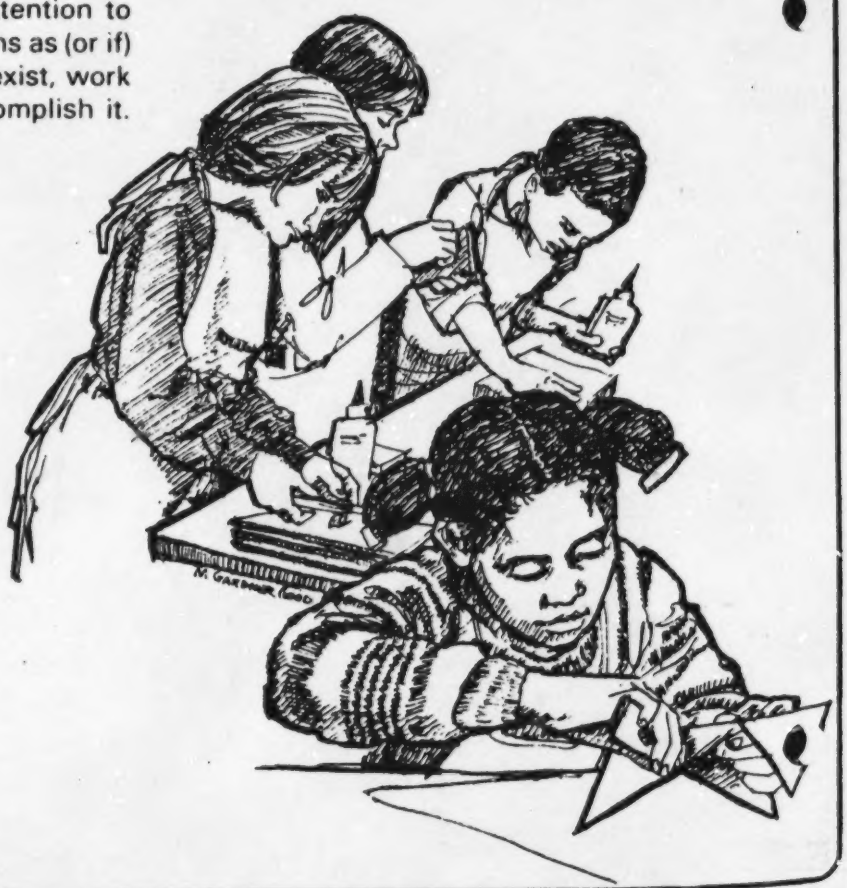
- in courses such as general woods, general industrial arts, and drafting there has been an increase in the percentage of females enrolled.
- The highest percentage of females enrolled in industrial arts was found in more non-traditional courses such as fluid power, plastics technology, manufacturing, research and development, and transportation. These courses represent important growth fields.

Increasing awareness about the issue of fairness to boys and girls has caused many industrial arts educators to consider the advantages all students can gain through industrial arts courses. All students need to grow in self-confidence and to learn skills which will enrich their personal and professional lives. One of the greatest opportunities industrial arts classes offer is the chance to solve problems and learn things which might otherwise never be learned. The educator's responsibility is to consider these opportunities desired for both girls and boys and actively encourage all students to participate in industrial arts activities and experiences.

A key factor in expanding educational options for girls and preparing them for participation in a technological world is the ability to adapt to the changing attitudes and trends which are affecting the lives of females today. Personal attitude change on the part of individual industrial arts teachers, teacher educators, curriculum developers, and researchers is critical to expanding industrial arts experiences for females. If teachers persist in supporting outdated attitudes about female roles, the education of females about the world of technology will be, by and large, excluded from their edu-

cation. Even if women continue to choose traditional occupations, such as homemaking, nursing, teaching, and clerical work, they will need to have an exposure to the study of technology in order to be able to work efficiently with the technological advances in these fields.

The standards will call attention to the magnitude of the problems as (or if) it exists. If equity does not exist, work will need to be done to accomplish it.



Strategies for Achieving Sex Equity

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Change is a slow process. Traditions are not relinquished easily. Industrial arts educators must examine their own beliefs and judge their worth. If they are dedicated to quality education for all students, industrial arts personnel must remove those barriers which prohibit girls or boys from exploring new alternatives.

Though industrial arts has been an integral part of the school curriculum for more than three-quarters of a century, there are students, parents, and school personnel who may not be aware of the fascinating areas included in the curriculum. Efforts to bring about a better understanding of industrial arts will help everyone appreciate its benefits for all students. Commitment for reaching all students involves some concrete actions such as examining attitudes and behaviors, carefully choosing instructional materials, and making conscious efforts to help people outside the classroom become aware of the accomplishments made by industrial arts students.

The steps which follow are designed to facilitate the implementation of the *Standards for Industrial Arts Programs* as it relates to sex equity. There are five principle steps using a variety of strategies:

- Step 1: Assessing Sex-Fair Teaching Behaviors
- Step 2: Reviewing Guidelines for Sex-Fair Language
- Step 3: Evaluating Curriculum and Instructional Materials
- Step 4: Determining Progress Toward Achieving Sex Equity
- Step 5: Planning Future Progress

• Step 1: Assessing Sex-Fair Teaching Behaviors

Checklist For Sex-Fair Teaching Behavior*

As an industrial arts teacher, you serve as a model for students. The example you set can significantly affect students' attitudes and behaviors concerning sex-fair treatment of others. Complete the following "Checklist for Sex-Fair Teaching Behavior" to assess the model you provide your students.

In my teaching, I:	Always	Sometimes	Never
1. Provide the same course content for students of both sexes.	☐	☐	☐
2. Provide the same learning activities and projects for students rather than different ones (such as more lab or shop work for boys, more book work for girls).	☐	☐	☐
3. Set the same standards of behavior for all students in the classroom.	☐	☐	☐
4. Allow all students equal access to tools and equipment.	☐	☐	☐
5. Encourage all students to be equally considerate and courteous of others.	☐	☐	☐
6. Administer the same reprimands or disciplinary actions to students for misbehavior.	☐	☐	☐
7. Use gender-free terms and occupational titles rather than sex-specific ones (such as "human" or "person" instead of "mankind," "man," or "saleslady").	☐	☐	☐
8. Avoid stereotypical phrases (such as "boys will be boys" and "girls should act ladylike").	☐	☐	☐
9. Give equal attention to students of both sexes (rather than more criticism for boys, support for girls, or vice versa).	☐	☐	☐

	Always	Sometimes	Never
10. Establish the same safety and/or sanitation and dress requirements for all students (such as all students wear shop or lab coats or aprons).	☐	☐	☐
11. Establish and apply the same grading system to all students (not allowing for one sex to be less capable).	☐	☐	☐
12. Incorporate the topic of sex discrimination, stereotyping, and bias into course content and discussion whenever possible.	☐	☐	☐
13. Provide information to students about expanding occupational and/or family activities for both sexes in areas that have traditionally been considered appropriate for only one sex.	☐	☐	☐
14. Assist both girls and boys in recognizing that their adult roles will probably include work, parenting, and homemaking.	☐	☐	☐
15. Involve students in identifying examples of sex discrimination, stereotyping, and bias in textbooks, curriculum materials, media and other course-related materials (such as trade journals, job descriptions, and application forms).	☐	☐	☐
16. Help students identify sex discrimination in their education and personal lives.	☐	☐	☐
17. Request anonymous student evaluations concerning any sex discrimination, stereotyping, or bias they may feel exists in my classroom.	☐	☐	☐
18. Encourage students to correct me if I "slip" and use sex-specific terms or sexist generalizations.	☐	☐	☐

*The checklist used here was adapted from:
Ferris, C. *Expanding adolescent role expectations: Information, activities, and resources for vocational education.* Ithica, New York: Cornell University, Community Service Education Department, 1977, p. 41.

14 • Step 2: Reviewing Guidelines for Sex-Fair Language

Language is a powerful tool. The words that we use to communicate our thoughts and attitudes to people indicate how we think and feel about them. Some patterns of usage in our language tend to belittle or ignore females in our culture. Review the following guidelines to determine the choices of words and phrases which are most appropriate to supporting sex equity:

Guidelines for Sex-Fair Language*

1. Actions and achievements for females should be recognized in language usage.
2. Women and girls should be given the same respect as men and boys in language usage.
3. Language usage needs continuous review. Avoid language that omits women:
   early man
   man and his world
   businessman
   repairmen
   common man
   the motorist. . . he
4. Avoid language that is demeaning of women:
   "The early Egyptians *allowed* women considerable control over property."
   "Mary Wells Lawrence is a highly successfull *woman* advertising executive."
   "the weaker sex"
   "the lady carpenter"
   "the little woman"
5. Avoid language which results in sex-role stereotyping:
   "In New England the typical farm was so small that the *owner* and *his sons* could take care of it by themselves."
   "Al listened patiently to the *ladies* chatter."
   "Children learn from the *wise men* of their town."
6. Women should be treated as a part of the rule, not as the exception. Generic terms, such as doctor and nurse, should be assumed to include both men and women, and modified titles such as "woman doctor" or "male nurse", should be avoided.

Alternatives to Sexist Language

Sexist Language	Non-Sexist Language
policeman, mailman, fireman	police officer, mail carrier, fire fighter
foreman	supervisor
mankind	human-race
forefathers	ancestors, predecessor
office girl	woman in the office
housewife	homemaker
the man on the street	the person on the street
everyone did his work	the students did their work, or everyone did his/her work
Gentlemen: or Dear Sir: (in correspondence)	Dear Sir or Madam: Dear Researchers: Dear Educators: Dear Colleagues: (or other terms describing profession)*
She is a pretty good carpenter. . . for a girl.	She is a good carpenter.
he - she, him - her, himself - herself	they, students, him/her, she/he, himself/herself
chairman (of an academic department)	chairperson, chair (if it is known that the institution has established either form as an official title—otherwise use chairman)
chairman (presiding officer of a committee or meeting)	chairperson, moderator, discussion leader

*These guidelines were adapted from:
A checklist for reviewing curriculum and textbooks.
Scott-Foresman and Co., 1974.

• Step 3: Evaluating Curriculum and Instructional Materials

Checklist for Evaluating Curriculum and Instructional Materials*

The following checklist is designed to help teachers identify sex bias and sex-role stereotyping in curriculum and textbooks. Most industrial arts subjects were formerly taught only to males. Now that these courses are open to both male and female students, subject matter needs to be expanded to reflect both sexes. Use the following checklist to determine whether or not the curriculum and instructional materials which are used in your programs are sex-fair:

	Yes	No
1. Do curriculum materials make both female and male students feel comfortable in learning about subjects formerly taught only to males?	☐	☐
2. Does the textbook make a special effort to include pictures of male and female students and adults in non-traditional roles?	☐	☐
3. Do learning activities and projects avoid sex-stereotyping according to past traditional roles?	☐	☐
4. When appropriate, are the historical and present-day accomplishments of both sexes included in the text?	☐	☐
5. Do textbooks for industrial arts courses point out to both males and females the advantages of acquiring experiences for the labor market and practical skills for daily living?	☐	☐
6. Do textbooks and other curriculum materials dispell the myth that tools and power driven machines are too dangerous for females?	☐	☐
7. Do learning activities include more exciting role models for boys than for girls?	☐	☐
8. Do you plan different activities, or different adaptations of the same activity, for boys or for girls?	☐	☐
9. Do course titles reflect generic terms such as "Human Resources and Technology"?	☐	☐

*These guidelines were adapted from:

Ferris, C. *Expanding adolescent role expectations: Information, activities, and resources for vocational education.* Ithica, New York: Cornell University, Community Service Education Department, 1977, p. 60.

Strategies for Achieving Sex Equity

Progress needs to be made toward achieving sex equity. There are many different strategies that could be used in accomplishing this goal. The following strategies will aid you in making progress toward treating both girls and boys equitably in industrial arts programs.

Standard Topic*	Strategy
Philosophy	Develop goal statements which are designed to achieve sex equity in the industrial arts department or program.
	Include objectives, strategies, and timelines to achieve sex equity in the staff's annual plans.
Instructional Program	Develop course titles which use generic terms.
	Use sex-fair language and illustrations in instructional materials and displays.
	Use checklists for evaluation of curriculum and textbooks.
	Revise laboratory projects and requirements to meet the needs of both girls and boys.
	Provide the same learning activities and projects for all students.
	Provide equal access to tools and equipment for all students.
	Discuss classroom information with students to explore: (1) effects of sex-role stereotyping; (2) advantages of industrial arts experiences in the future of both boys' and girls' lives; and (3) need for students to prepare for a dual role of homemaker/wage earner.
	Set the same standards of behavior for all students in the classroom.
Student Populations Served	Promote expanded industrial arts choices for females.

Instructional Staff	Include staff, students, parents, and the community in the development of plans designed to increase sex equity efforts in industrial arts programs.
	Provide at least one inservice training program per year for the staff to discuss sex equity issues.
Administration and Supervision	Review demographic data about all industrial arts students at the time of program improvement planning sessions.
	Provide the staff with technical assistance to carry out sex equity efforts in industrial arts programs.
Support Systems	Encourage *all* students to participate in group counseling options that promote broad exploration of career choices.
	Provide nontraditional role models for females and males in laboratory and class activities.
	Provide physical facilities such as restrooms, showers, and lockers to both females and males.
Instructional Strategies	Utilize written instructional plans and methods to encourage and enhance career awareness and skill development for both sexes.
	Base various instructional methods upon individual student needs rather than upon the sex of the student.
	Include within learning activities appropriate models for boys and girls.
	Involve students in identifying examples of sex discrimination, sex-role stereotyping, and sex bias in textbooks, curriculum materials, media, and other course-related materials such as trade journals, job descriptions, and application forms.
	Use gender-free terms and occupational titles rather than sex-specific ones such as "human" or "person" rather than "mankind," "man," or "saleslady."

Instructional Strategies (cont.)	Give equal attention to students of both sexes (rather than more criticism for boys, support for girls, or vice versa).
	Encourage all students to be equally considerate and courteous of others.
	Administer the same reprimands or disciplinary actions to students for misbehavior.
	Establish the same grading system and apply it to all students (not allowing for one sex to be less capable).
Public Relations	Advertise the program broadly to attract students of both sexes.
	Provide education to parents, employers, and community members regarding the need for equitable treatment of girls and boys in industrial arts programs.
	Provide information to all students about expanding occupational and/or family activities for both sexes in areas that have traditionally been considered appropriate for only one sex.
Safety and Health	Establish the same safety and/or sanitation and dress requirements for all students.
Evaluation Process	Request anonymous student evaluations concerning any sex discrimination, sex-role stereotyping, or sex-bias which exists in the classroom.
	Encourage students to correct persons if they "slip" and use sex-specific terms or sexist generalizations.
	Discuss this checklist with a supervisor as part of a periodic performance review.

*These ten Standard Topics were excerpted from:
Standards for industrial arts programs. Virginia Polytechnic Institute and State University, November, 1981.

• Step 5: Planning Future Progress

Strategy Improvement Form

The future can be determined by careful planning. Use the following "Strategy Improvement Form" to assist in this planning:

School _____ **Reported By** _____

Date _____ **Submitted To** _____

1. List the conditions which you think are assets in your program to help you achieve sex equity.

2. List conditions or items which you think need immediate improvement to help you work toward sex equity in your program.

3. List the objectives needed to be achieved during the next fiscal year to establish sex-fair opportunities for students in your program.

Resource Personnel

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Through the provisions of Title IX (P.L. 92-318) and Title II (P.L. 94-482), resource people are available in each state to help educators provide a sex-fair atmosphere in the classroom. Their services are available to local educators.

Title IX is implemented by a Title IX Coordinator at the local level in each school district who is responsible for making sure that the schools carry out the provisions of the law. These Title IX coordinators are well versed in sex-fair policies, practices, and procedures which apply to the treatment of students.

In each state department of education, the vocational-technical division employs a Sex Equity Coordinato. This person's responsibilities include providing technical assistance to vocational educators to expand career options for females and eliminating the sex bias and sex-role stereotyping which limits those options.

Both of these people are excellent resources to help educators at the local level to provide fair and equal educational opportunities for students in industrial arts programs. Contact them through your state department of education or local school district.

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